

WHAT IS CLAIMED IS:

1. A method for ameliorating the symptoms of a bone or cartilage disorder in an individual at risk thereof, comprising administering to said individual an effective amount of an arginine silicate inositol complex.
2. The method of Claim 1, wherein said arginine silicate inositol is administered in a form selected from the group consisting of a powder, a liquid, and a combination of a powder and a liquid.
3. The method of Claim 1, wherein said bone disorder is selected from the group consisting of osteoporosis, osteogenesis imperfect, and bone fractures.
4. The method of Claim 1, wherein said cartilage disorder is selected from the group consisting of osteoarthritis, inflammatory arthritis, a torn tendon, and a torn ligament.
5. The method of Claim 1, wherein said administration is accomplished parenterally, orally, or intravenously.
6. The method of Claim 1, wherein arginine-silicate-inositol is administered in conjunction with other conventional bone therapies.
7. The method of Claim 6, wherein said other bone therapies are selected from the group consisting of surgery, casting, calcium supplementation and anti-bone resorption drugs.
8. The method of Claim 1, wherein said effective amount of said arginine silicate inositol complex comprises arginine, silicate, and inositol at a molar ratio selected from the group consisting of between about 2:2:1; 2:2:1.5; 1:1:1; 2:2:3; and 3:3:2.
9. The method of Claim 1, wherein said effective amount of said arginine silicate complex is between about 2 mg/kg body weight and about 2,500 mg/kg body weight.
10. The method of Claim 9, wherein said effective amount of said arginine silicate complex is between about 5 mg/kg body weight and about 1,000 mg/kg body weight.
11. The method of Claim 1, wherein said individual is a mammal.
12. A method of increasing levels of collagen in an individual, comprising the step of administering to said individual an effective amount of an arginine silicate inositol complex.

13. The method of Claim 12, wherein said administering step is selected from the group consisting of parenteral administration, oral administration, or intravenous administration, and topical administration.

14. The method of Claim 12, wherein said effective amount of said arginine silicate complex is between about 2 mg/kg body weight and about 2,500 mg/kg body weight.

15. The method of Claim 14, wherein said effective amount of said arginine silicate complex is between about 5 mg/kg body weight and about 1,000 mg/kg body weight.

16. The method of Claim 12, wherein said individual is a mammal.

17. A method of increasing bone length in an individual, comprising the step of administering to said individual an effective amount of an arginine silicate inositol complex .

18. The method of claim 17, wherein said increase is in femur length.

19. The method of Claim 17, wherein said administering step is parenteral or oral.

20. The method of Claim 17, wherein said effective amount of said arginine silicate complex is between about 2 mg/kg body weight and about 2,500 mg/kg body weight.

21. The method of Claim 17, wherein said individual is a mammal.

22. A method for reversing the weakening of bone due to a reduction in mechanical stress comprising identifying an individual suffering from weakening of bone due to reduction in mechanical stress and administering to said an individual an effective amount of an arginine silicate inositol complex.

23. The method of Claim 22, wherein the cause of the reduction of mechanical stress is selected from the group consisting of exposure to weightlessness and immobilization.

24. The method of Claim 22, wherein said administering step is accomplished by a method selected from the group consisting of parenteral administration, oral administration, and intravenous administration.

25. The method of Claim 22, wherein said effective amount of said arginine silicate inositol complex is between about 2 mg/kg body weight and about 2,500 mg/kg body weight.

26. The method of Claim 24, wherein said individual is a mammal.

27. A method of decreasing insulin resistance in an individual, comprising the step of administering to said individual an effective amount of an arginine silicate inositol complex.

28. The method of Claim 27, wherein said administering step is parenteral or oral.

29. The method of Claim 27, wherein said effective amount of said arginine silicate inositol complex is between about 2 mg/kg body weight and about 2,500 mg/kg body weight.

30. The method of Claim 29, wherein said effective amount of said arginine silicate complex is between about 5mg/kg body weight and about 1,000 mg/kg body weight.

31. The method of Claim 27, wherein said individual is a mammal.

32. A method of treating a disease secondary to coronary vascular disease comprising administering an effective amount of an arginine silicate inositol complex to treat said disease.

33. The method of Claim 32, wherein said disease is selected from the group consisting of nephrosclerosis, abnormal liver lipid concentrations, microvascular complications, and macrovascular complications.

34. The method of Claim 32, wherein said administration is parenteral or oral.

35. The method of Claim 32, wherein said effective amount of said arginine silicate complex is between about 2 mg/kg body weight and about 2,500 mg/kg body weight.

36. A method for stabilizing hormone levels for improvement of metabolic function in an individual in need thereof comprising administering to said individual an effect amount of an arginine silicate inositol complex.

37. The method of Claim 36, wherein said administration is parenteral or oral.

38. The method of Claim 36, wherein said effective amount of said arginine silicate complex is between about 2mg/kg body weight and about 2,500 mg/Kg body weight.

39. The method of Claim 36, wherein said individual is a mammal.

40. A method for increasing nitric oxide production in an individual, comprising the step of administering to said individual an effective amount of an arginine silicate inositol complex.

41. The method of Claim 40, wherein said administering step is parenteral or oral.

42. The method of Claim 40, wherein said effective amount of said arginine silicate complex is between about 2 mg/kg body weight and about 2,500 mg/kg body weight.

43. The method of Claim 41, wherein said individual is a mammal.

44. A method for treating a disorder caused by or exacerbated by reduced levels of nitric oxide by increasing concentrations of nitric oxide in an individual, comprising the step of administering to said individual an effective amount of an arginine silicate inositol complex.

45. The method of Claim 44, wherein said disorder is selected from the group consisting of pulmonary hypertension, renal disease, atherosclerosis, hypertension, diabetes, hypercholesterolemia, hyperglycemia, heart failure, Fabry's disease, chronic obstructive pulmonary disease (COPD), inflammatory bowel disease, Crohn's disease, ulcerative colitis, perinatal asphyxia, meconium aspiration syndrome, Group B strep sepsis, congenital diaphragmatic hernia, ischemic heart disease, hyperhomocysteinemia, multiple sclerosis, Takayasu's arteritis, autosomal dominant polycystic kidney disease, end-stage renal failure, cancer and liver disease.

46. The method of Claim 44, wherein said arginine silicate inositol complex is administered parenterally or orally.

47. The method of claim 44, further comprising administering a second beneficial agent effective in treating a disorder caused by or exacerbated by reduced levels of NO, wherein said second beneficial agent is a conventional therapy for NO deficiencies.

48. The method of Claim 44, wherein said effective amount of arginine silicate complex is between about 2 mg/kg body weight and about 2,500 mg/kg body weight.

49. The method of Claim 44, wherein said individual is a mammal.

50. A method for reducing the concentration of a marker for bone resorption in the tissue of an individual, comprising the step of administering to said individual an effective amount of an arginine silicate inositol complex.

51. The method of claim 50, wherein said marker of bone resorption is selected from the group consisting of pyridinoline cross-linking peptides, including C- and N-telopeptides, N-telopeptide cross-links (NTx), C-telopeptide cross links (CTx) and pyridinoline cross-linked carboxyterminal peptides (ICTP), total, peptide-bound and free

pyridinolone, hydroxyproline, deoxypyridinolone, tartrate-resistant acid phosphatase and bone sialoprotein

52. The method of Claim 50, wherein said administering step is parenteral or oral.
53. The method of Claim 50, wherein said effective amount of said arginine silicate complex is between about 2 mg per kg body weight and about 2,500 mg per kg body weight.
54. The method of Claim 50, wherein said individual is a mammal.
55. A method for increasing the concentration of a marker for bone formation in the tissue of an individual, comprising the step of administering to said individual an effective amount of an arginine silicate inositol complex.
56. The method of claim 55, wherein said marker of bone formation is selected from the group consisting of osteocalcin, alkaline phosphatase and procollagen type I C-/N-extension peptides (PICP, PINP).
57. The method of Claim 55, wherein said administering step is parenteral or oral.
58. The method of Claim 55, wherein said effective amount of said arginine silicate complex is between about 2 mg/kg body weight and about 2,500 mg/kg body weight.
59. The method of Claim 55, wherein said individual is a mammal.
60. A method of reducing markers of poor cardiovascular health comprising administering an effective amount of arginine silicate inositol complex.
61. The method of claim 60, wherein said marker of poor cardiovascular health are selected from the group consisting of elevated urinary albumin concentration and increased vascular contractility.
62. The method of Claim 60, wherein said administering step is parenteral or oral.
63. The method of Claim 60, wherein said effective amount of said arginine silicate complex is between about 2 mg/kg body weight and about 2,500 mg/kg body weight.
64. The method of Claim 60, wherein said individual is a mammal.
65. A method of promoting cardiovascular health in an individual in need thereof, comprising administering to said individual an effective amount of an arginine silicate inositol complex.
66. The method of Claim 65, wherein said administering step is parenteral or oral.

67. The method of Claim 65, wherein said effective amount of said arginine silicate complex is between about 2 mg/kg body weight and about 2,500 mg/kg body weight.
68. The method of Claim 65, wherein said individual is a mammal.